Foreign Agriculture

August 1, 1977

Foreign
Agricultural
Service
U.S. DEPARTMENT
OF AGRICULTURE

Collecting palm fruit on Malaysian oil palm estate

Oil and Meal Outturns May Rebound in 1978

By Alan E. Holz

The seesawing oil and meal markets are taking another sharp turn this year, after having squeaked through one of the tightest supply situations since 1972/73. In contrast to the short 1976 U.S. soybean crop and resulting price gains, prospects appear good for abundant oilseed crops this year, both in the United States and major producing countries abroad. As a result, oil and meal prices have declined substantially, and foreign crushers are poised to step up their buying once prices stabilize.

The cliff-hanger drama caused by tight oilseed meal supplies appears headed for an anticlimactic end this fall if USDA forecasts of bumper 1977 oilseed crops prove correct.

These preliminary forecasts point to a record world production of both oils and meals in calendar 1978 if oilseed crops now in the ground progress as expected and prospective plantings in Southern Hemisphere nations continue their rapid expansion of recent years. Exports, in turn, are seen hitting record or near-record levels, while leaving enough slack for some rebuilding of depleted stocks. The outlook, in brief:

• A new high for 1978 world meal output, which is forecast at 75.6 million metric tons, soybean meal basis, against a reduced 66 million tons in 1977 and the previous high of 72 million in 1976. After accounting for 90 percent of the production decline last year, the United States could supply three-fourths of the 1978 gain.

• An unusually low U.S. carryin of soybeans at the beginning of the 1977/78 season as a result of unexpectedly strong protein meal demand during 1977 and resulting near-record world exports of oilseeds and meals, estimated at 32.2 million tons, soybean-meal equivalent.[1] Even the United States, with a short soybean crop in 1976, will see its meal exports reach their second highest level in history if they hit the 16.6 million tons currently estimated.

• Possible record world meal exports in 1978 of close to 35 million tons—more than 2.6 million above estimated 1977 shipments—with just under half of this total shipped by the United States.

• Records in 1978 for both world and U.S. outturns of fats and oils forecast at 51.6 million and 12.5 million tons, respectively.

• A substantial reduction in 1978 carryin of oils and fats in major producer-exporter countries in the wake of reduced production in 1977 and unusually strong demand from infrequent customers such as India.

• A possible 810,000-ton gain in world oilseed, oil, and fat exports to 16.9 million tons oil basis, in 1978, including 5.4 million from the United States.

These forecasts are very tentative, of course. They are based on estimates of Northern Hemisphere oilseed harvests that could still be set back by unfavorable weather and projections of 1978 Southern Hemisphere crops, to be planted this fall, which will be influenced both by weather and farmers' responses to prices in coming months.

One of the first, and crucially important, tests will be the U.S. soybean crop, which so far looks good thanks to record plantings and drought-breaking rains in much of the Midwest. USDA is tentatively forecasting the crop at 41-46 million metric tons (1.5-1.7 billion bu)—7-11 million tons above the poor 1976 results and close to the record 1973 harvest. On a meal basis, combined U.S. production of the major oilseeds and fishmeal is estimated at 46 percent of total world output, giving the United States a pivotal role in world meal supply, although one that has lessened in recent years as a result of burgeoning crops in Brazil and Argentina.

(A much more precise reading of the U.S. situation will come when the first official crop forecast is released on August 11.)

Assuming that it falls near the present forecast, this year's U.S. crop should bring considerable relief to the marketplace, which is almost on a "hand-to-mouth" basis now as a result of the reduced 1976 meal crop and strong foreign demand for U.S. soybeans and products.

U.S. soybean stocks at the close of the 1976/77 marketing year are expected to fall to 1.8 million tons—the second lowest level in the past decade. The low was set in 1972/73, when U.S. soybean exports gained by 15 percent, or 1.7 million tons, and carryover stocks fell to 1.6 million tons as strong world demand coincided with a severe fishmeal shortfall in Peru and reduced oilseed crops elsewhere.

U.S. carryout stocks of soybeans then rebounded to 5.0 million tons in 1974/75 and 6.7 million in 1975/76 following a world recession that reduced demand in 1974/75 and a substantially larger crop in 1975/76.

So fast was the rebound, in fact, that farmers by planting time last year were reluctant to plant heavily in soybeans for fear farm prices might slip below the 1975/76 national average of $4.92 per bushel. This hesitation caused a reduction in plantings, sparking a production decline that was carried still further by last year's drought and resulting drop in soybean yields.

In response to the recent supply crunch, U.S. farm prices for soybeans climbed to an average $9.21 per bushel in May compared with the peak average price of $10 per bushel in June 1973. Since May, however, prices have fallen sharply. The early-season price gains served to ration demand—although not to the extent anticipated—while also encouraging Northern Hemisphere farmers to boost their 1977 soybean plantings.

U.S. farmers' plantings reported on June 30, 1977, totaled around 59 million acres (23.9 million hectares) for what will probably turn out to be the largest U.S. soybean area on record. The previous high was 56.7 million acres (22.9 million hectares) in 1973, whereas plantings in 1976 fell to 50.3 million acres (20.4 million hectares) as a result of the bleak early-season price prospects relative to those

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[1]All data on protein meal are on a soybean-meal-equivalent basis, while those on fats and oils are on an oil-equivalent basis.

for competing crops.

In Canada, farmers also have shifted to oilseeds—largely rapeseed — in response to attractive prices vis-á-vis depressed returns for wheat, the main alternative crop. As a result, that country's rapeseed production is seen rising to about 1.4 million tons from the reduced 1976 level of 930,000.

Southern Hemisphere producers, meanwhile, seem likely to push ahead with their impressive soybean expansion programs. Brazil remains in the forefront of this drive, but Argentina also is moving up rapidly as a producer-exporter of soybeans and products.

In Brazil, the soybean crop to be harvested next April is expected to be in the magnitude of 13.8 million tons, which would be a 15 percent gain from the current year's 12-million-ton estimate. Although Brazil's 1977 crop rose a solid 11 percent over that of 1976, it failed to meet early-season forecasts of up to 13.2 million tons. Lower than expected yields in Paraná accounted for the reduced estimate, aggravating the tightening supply situation that developed following the shortfall in 1976 U.S. soybean production.

In Argentina, soybean production is continuing an upward spiral—reminiscent of Brazil's early soybean expansion — as Argentine producers respond enthusiastically to the current Government's market-oriented program. Current indications point to a 40 percent gain in 1978, to 1.8 million tons, over the 1977 crop.

Output of another important Southern Hemisphere product, Peruvian fishmeal, appears likely to contract in 1977 as a result of uncertainty now surrounding fish stocks in Peruvian waters. The Peruvian Government is still holding to its original calendar 1977 fishing target of 4-4.5 million tons. On May 6, however, the Government discontinued anchovy fishing in all but one fishing

Meal Demand To Recover In 1977/78

Forecasts from a special survey taken by U.S. agricultural attachés indicate that 1977/78 (Oct.-Sept.) imports of U.S. soybeans and meal into 13 major markets may rise about 7 percent over the 1976/77 level to around 20 million metric tons, meal basis. In 1975/76, these countries took over three-fourths of world exports of soybeans and meal. The expected gains reflect expanding livestock numbers and a growing demand, along with prospects for lower meal prices.

Similar projections last year pointed to a 2.1 percent decline in the volume of 1976/77 takings by these countries, compared with the currently indicated decline of 1.4 percent. Imports during that period were restricted by short supplies and high prices, despite some increase in animal units.

In addition to these countries, the Soviet Union has emerged as a major soybean importer in recent years and is likely to continue importing substantial quantities of protein feeds in 1977/78. Although at this early date it is impossible to assess actual volumes to be imported by the USSR in 1977/78, we do know the following: Soviet livestock numbers are expanding; domestic oilseed production will likely recover significantly, reflecting improved growing conditions to date; oilseed stocks probably are relatively small following the small domestic crops of 1975 and 1976; and Soviet meal use per livestock unit continues low.

In contrast to rising prices a year ago, prices for soybeans and meal recently have been declining, reflecting substantially larger U.S. plantings in 1977. At current prices, the relative feeding value of soybean meal in Europe is reportedly attractive for feed compounders. Consequently, there should be a good potential market which may materialize as soon as the price trend stabilizes. □

Import Requirements of Soybeans and Meal, Into Selected Major Markets

[In 1,000 metric tons]

Country	1975/76			1976/77[1]			1977/78[2]		
	Beans	Meal	Total [meal equiv.]	Beans	Meal	Total [meal equiv.]	Beans	Meal	Total [meal equiv.]
Belgium-Luxembourg	811	350	995	800	350	986	900	400	1,116
Denmark	470	490	864	450	550	908	475	550	928
France	446	1,781	2,136	680	1,550	2,091	800	1,650	2,286
Italy	1,133	723	1,624	1,100	800	1,675	1,250	900	1,894
Netherlands	1,361	788	1,870	1,240	860	1,846	1,440	860	2,005
United Kingdom	1,046	197	1,029	1,000	180	975	1,130	140	1,038
West Germany	3,399	868	3,570	3,400	930	3,633	3,500	920	3,702
Spain	1,829	492	1,946	1,900	550	2,060	1,900	600	2,110
Czechoslovakia	—	542	542	—	500	500	—	525	525
Poland	175	540	679	20	400	416	50	500	540
Yugoslavia	—	245	245	44	200	235	107	175	260
Japan	3,645	144	3,042	3,420	300	3,019	3,750	180	3,161
Taiwan	800	—	636	700	—	557	850	35	711
Total	15,115	7,160	19,178	14,754	7,170	18,901	16,152	7,435	20,276
Actual change, meal basis	—	—	—	-287	10	-277	1,110	265	1,375

[1]Partly estimated. [2]Forecast.

zone, and indications are that full-scale fishing may not be resumed until September or October.

Given this expectation, Peru's fish catch will probably dip to 2.5-3 million tons from the 3.9 million of 1976.

A catch of around 3 million tons, in turn, would result in a fishmeal production of about 660,000 tons in calendar 1977, against 849,000 in 1976.

For 1978, it is anticipated that Peru's production may recover to about the 1976 level of 850,000 tons, from which perhaps 700,000 tons might be available for export. This would represent a slight gain from volumes moved in 1976 and forecast for 1977.

In contrast to the extremely tight world supply situation for protein meal, oils and fats have been in relative abundance so far—but with pressure on the market increasing as a result of India's large imports of vegetable oils this year. Indications are that those imports could exceed 500,000-550,000 tons in the 1976/77 marketing year (October-September) — with some 300,000 tons coming from the United States alone—compared with total imports of only 190,000 in 1975/76.

A 1.2-million-ton decline in India's 1976 peanut crop is largely responsible for the increased trade.

The timely start of the monsoon has brightened 1977 harvest prospects, although it is too soon to assess accurately the final outcome. But even if India's production improves from last year's reduced volume, substantial imports of vegetable oils may be required in view of the very low level of per capita fats and oil consumption in India.

India's peanut meal exports in 1976/77 are expected to fall below 800,000 tons from 1.2 million last season, and the Indian Government has embargoed further exports from the 1976 crop.

Another key factor in the vegetable oil situation is Malaysian palm oil production, which seems poised to resume its sharp upward trend following a recent slowdown due to dry weather.

During October 1976-February 1977, West Malaysian palm oil production, at 537,000 tons, was running only 7 percent above that of a year earlier, while exports, at 527,000 tons, were ahead by 8 percent. This contrasts with production gains of 19 percent, 24 percent, and 13 percent, respectively, during the 3 previous crop years (1973/74 through 1975/76).

This slackened growth is not consistent with the continued large increases in harvested area of Malaysian palm and has been attributed largely to the dry weather that plagued key oil palm areas of Malaysia last year. Conversely, more normal rainfall in recent months is expected to accelerate production growth during the remainder of 1976/77, so that the year's total output could reach 1.5 million tons, compared with 1.2 million in 1975/76.

Malaysian palm oil exports recently have been increasing even more rapidly than production. For instance, the absolute gains in West Malaysia's exports during 1974/75 and 1975/76 both significantly exceeded the absolute gains registered in production during the same years. Stocks should now be drawn down from the apparently large carryin level as of October 1, 1974.

Philippine copra production and exports, in contrast, continue to feel the effects of the drought that hit the country last year, and 1978 may see a futher decline in Philippine exports of copra and coconut oil.

Philippine exports of copra and coconut oil in January-May 1977 were only 417,000 tons, oil equivalent basis, or 24 percent below those in the same period of 1976. However, the skewed distribution of rainfall in the Philippines suggests that monthly exports will show smaller percentage declines during the remainder of calendar 1977.

In the USSR, farmers, reportedly overcame a slow start in their spring planting to achieve a sunflower area of around 4.6 million hectares—5 percent above that of 1976. Their goal is to produce 7.5 million tons of sunflowerseed, although USDA currently is pegging the crop at a more likely 6-6.5 million tons, compared with the poor outturn of 5.2 million in 1976.

The PRC, on the other hand, continues to experience dry weather in the North China Plain, where much of its oilseed crop is grown. As a result, no significant recovery is seen for that country's 1977 soybean crop from last year's reduced estimated level of 9.5 million tons. □

World Production and Exports of Oils and Meals

[In Million Metric Tons]

Item	United States	Foreign	World	Soybean	Other
MEALS[1]					
Production:[2]					
1973[3]	28.50	29.02	57.52	33.30	24.22
1974	34.05	34.47	68.52	42.14	26.38
1975[4]	27.11	36.20	63.31	37.36	25.95
1976[5]	33.60	38.59	72.19	45.65	26.54
1977[6]	28.03	38.17	66.20	40.57	25.63
1978[6]	34.81	40.78	75.59	48.64	26.95
Exports:[7]					
1973[3]	15.25	10.41	25.66	18.14	7.52
1974	16.44	10.90	27.34	20.38	6.96
1975[4]	14.09	13.07	27.16	20.02	7.14
1976[5]	17.46	15.78	33.24	24.75	8.49
1977[6]	16.61	15.62	32.23	24.36	7.87
1978[6]	17.36	17.50	34.86	26.66	8.20
OILS[8]					
Production:					
1973[3]	10.65	32.25	42.90	7.41	35.49
1974	12.34	35.09	47.43	9.38	38.05
1975[4]	10.13	36.23	46.36	8.32	38.04
1978[5]	12.09	37.39	49.48	10.16	39.32
1977[6]	10.81	36.95	47.76	9.03	38.73
1978[6]	12.50	39.12	51.62	10.83	40.79
Exports:[9]					
1973[3]	4.56	8.76	13.32	3.25	10.07
1974	5.15	8.50	13.65	3.81	9.84
1975[4]	4.19	9.49	13.68	3.55	10.13
1978[5]	5.07	10.71	15.78	4.50	11.28
1977[6]	5.36	10.76	16.12	4.67	11.45
1978[6]	5.40	11.53	16.93	4.86	12.07

[1]Includes soybean, fish, peanut, sunflower, cotton, linseed, rapeseed, copra and palm kernel meal, expressed in terms of 44-percent soybean meal. [2]Calculated from assumed extraction rates applied to that portion of each crop available for crushing and/or export and not actual crush. [3]Annual changes for 1973 were calculated from 1965-75 trend. [4]Preliminary. [5]Estimate. [6]Forecast. [7]Includes the meal equivalent of seed exports. [8]Includes animal, vegetable and marine oils and fats. [9]Includes the oil equivalent of seed exports.

French Dairy Industry Holds Up Under Drought

Severe drought during the summer of 1976 raised the costs of French dairymen, but they nevertheless maintained their herds and were able to push milk production and exports slightly above 1975 levels. About 70 pecent of France's dairy exports were to other member countries of the European Community; other destinations required subsidies.

Despite the adverse effects of drought on France's agricultural output during 1976, milk production and exports rose slightly over 1975 levels.

Milk output totaled 31.1 million metric tons, compared with 30.9 million tons during 1975.

French dairy exports and imports rose during 1976 from year-earlier levels, but since most of these transfers were to or from other European Community (EC) countries, it was less a matter of international trade than a series of transactions within a customs union—the EC.

These transactions heavily reflected EC intervention, internal monetary programs, export encouragement, and food aid policies. A significant part of France's "exports" of nonfat dry milk (NFDM) and butter to West Germany, for example, were to intervention depots in that country because of more favorable intervention rates after currency conversions.

Some exports of NFDM to the United Kingdom reflected the absence of surplus stocks in that country, compared with the low-cost (subsidized) availability of NFDM in France for feed compounders of both countries.

All told, about 70 percent of France's 1976 dairy exports were to other EC countries. Subsidies figured importantly in France's dairy exports to third (i.e., non-EC) countries, except the United States. Countervailing duty actions in the United States have limited the application of subsidies for cheese exports to this country.

Because internal EC prices for butter and NFDM are about three times the prices in unprotected markets, offsetting subsidies (termed "restitutions") are added to introduce these products into world trade.

Beyond subsidized exports, the EC has made substantial contributions of surplus dairy products to the World Food Program, with such deliveries being recorded as "exports."

French dairy exports to the United States were practically all of cheese. The U.S. quota system does not permit imports of butter or NFDM from France. The cheese trade was somewhat higher in 1976 than in 1975, but still below the 1972-74 level.

Exports of casein from France to the United States previously had been important, but in 1976 were near zero because of hoof-and-mouth disease restrictions. France is seeking modifications of U.S. sanitary regulations to permit resumption of this trade.

Even though the 1976 drought threatened them with financial loss, French dairy producers in general maintained cow numbers during 1976. This factor, coupled with a high calving rate, explains why France's 1976 population of cows in milk—an estimated 10.2 million head—was practically the same as the year-earlier total.

Despite the maintenance of cow numbers, calving rates in 1977 may be reduced and death losses among new-born calves may rise because of shortages and quality deterioration of available feeds following the drought.

The burden of purchasing additional feed supplies to maintain their herds pressed financially on France's dairy producers. In many cases, they resorted to borrowing, especially from Government assistance agencies.

Factory output of fluid milk, yogurt, and cheese increased steadily from 1972 to 1976. Cheese production rose about 2.5 percent during 1976, sustained by strong exports and expanded domestic consumption.

Other increases in output during 1976 were in dried whey, for which prices became more attractive, and concentrated milk, the output of which is irregular because of stock changes.

The stable outturn of casein during 1976 is an adjustment to the reduced level of exports, which became apparent in 1975.

Stocks of cheese were drawn down during 1976 by strong domestic and export demand, and this pattern is expected to continue during 1977.

Butter stocks, on the other hand, were about 20,000 tons higher at the end of 1976 than a year earlier because of lags in both exports and domestic consumption.

France's large stocks of butter are a major problem in the country's dairy sector. French dairy producers have reacted strongly to attempts by the U.K. dairy sector to prevent further subsidized sales of butter to the USSR.

The continuing EC surplus of NFDM is the other pressing dairy problem for France and the EC in general. While mid-1977 stocks are below the year-earlier level, they are now controlled only by programs to subsidize their mixing into livestock and poultry rations, as well as to divert the liquid skim milk, from which NFDM is made, to swine feeding and to casein production.

While the 1977/78 EC support price package has been established, the deferred effective date (Sept. 16, 1977) for the new co-responsibility tax scheme makes uncertain whether or not a deferred impact on the dairy sector will be felt toward the end of 1977.

Outstripping the small increase during 1976 in output of cow's milk, production of goat's milk rose 5 percent to 396,000 tons. Goat raising is expanding in France because of greater demand for cheeses made wholly or in part from goat's milk. □

Based on dispatch from Evans Browne, Assistant U.S. Agricultural Attaché, Paris.

Poland's 5-Year Plan Sets High Food Goals

By Thomas A. Vankai

Because of food riots in mid-1976, the Polish Government has reevaluated its 1976-80 development plan to give greater emphasis to agriculture—particularly food production. Despite its intent to push both crop and livestock production, the Polish Government will still have to import grain and oilmeals, with the United States being one of its major suppliers.

Reacting to mid-1976 food riots in Warsaw and other major cities, the Polish Government has reevaluated its 1976-80 development plan to allot a higher priority to agriculture, especially food production.

Output in both the crop and livestock sectors is to be pushed, and stringent efforts are to be made to increase yields. But despite these goals, Poland will still have to import large volumes of grain and oilmeals, with the United States being one of the major suppliers.

In 1976, the United States exported $492 million worth of agricultural products to Poland, up 28 percent from $384 million a year earlier. Last year's exports included wheat (736,000 metric tons), foodgrains (2.2 million tons), soybean meals (431,000 tons), nonmanufactured tobacco (1,370 tons), and cotton (32,000 running bales). In 1977, Poland will continue to be the most important importer of U.S. agricultural commodities among East European countries.

Investment in Poland's agriculture and food industries will be at the expense of other sectors. The current investment target for 1976-80 is Zl560 billion—22 percent of total investments, compared with 20 percent in 1971-75 — with especially heavy expenditures in early 1977. (Zl33.20 = US$1 at the tourist rate.) These funds come from monies allocated from the national budget, profits earned by Government enterprises, and from bank and foreign credits. The rate of investment will increase for most projects, but it will show the greatest climb for the purchase of farm machinery—both of the smaller types used on private farms and larger ones used on socialized enterprises.

But despite this investment rise, the plan calls for a 16-19-percent growth rate in farm production, somewhat smaller than the 20 percent achieved in 1971-75. A 20-23 percent rise is projected in crop output and 13-16 percent in livestock production. In the crop sector, the largest target is in planned grains and sugarbeet outturns.

The planned grain production is expected to reach an annual average of 25-26 million tons in 1976-80, up from 21 million tons in 1971-75. Sown grain area is slated to rise from 8.2 million hectares (53 percent of the available arable land in 1971-75) to 8.5 million hectares (55 percent) in 1980. Sugarbeet area is projected to rise from 450,000 hectares to 600,000 to boost output from 13.8 million tons to 22-23 million.

Most of the plan's rise in output hinges on larger yields rather than increased area. Farm managers will be encouraged to use more improved seeds; to shift from rye and oat production to higher yielding wheat and barley; to boost fertilizer and plant protection chemical usage; to adopt more effective management techniques; and to take advantage of large-scale economies and practices by increasing the size of production units.

During the past few years, corn area for seed has increased from an experimental 5,000 hectares in 1974 to 15,000 in 1975, and to 50,000 in 1976. If corn production proves successful in coming years, the area will be upped to 400,000 hectares by 1980. French corn varieties are being used, which require shorter vegetative periods and yield up to 50 quintals per hectare.

To accommodate the increased grain and sugarbeet areas, some potatoes and forage crops must be displaced and all idle land put under cultivation. A 7-percent drop in potato area is expected to be offset by a gain in yield, but, since the plan calls for output to match the 1971-75 average of 47 million tons, this could be difficult.

An increase of more than one-third is planned in fruit production between 1975 and 1980 through enlargement of producing units and farm cooperative activities. Vegetable production in greenhouses is slated to rise threefold after 100 large units are constructed.

Compared with 1971-75 data, the current plan calls for rises of 16-17 percent in hog numbers (although they fell by 22 percent in 1976); 15 percent in cattle, including 10 percent in cows; and 30 percent in sheep. On the other hand, a one-fourth cut is planned in the number of horses, which should release feed for use by the more productive cattle sector.

Between 1975 and 1980, Polish target for cattle numbers is a rise of 13.2 percent to 15 million head; for hogs, 10.3 percent to 23.5 million; and sheep, 32.3 percent to 4.2 million head.

Live weight cattle produc-

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Harvesting grain in the Polish village of Borowina. As part of its 5-year plan, Poland is pushing production of grain, shooting for an average annual output of about 25 million tons in 1976-80.

tion for slaughter is expected to rise nearly 25 percent to 1.65 million tons between 1975 and 1980, hogs by 22.6 percent to 2.82 million tons, and poultry by 67.6 percent to 570,000 tons. Milk output is slated to grow 22 percent to 20 million tons, and eggs by 12.5 percent to 9 million.

The planned combined increase for slaughter cattle, hogs, and poultry between 1975 and 1980 is 27 percent.

The plan also calls for between 99,000 and 111,000 more tractors of various sizes to be delivered in 1976-80 than in 1971-75 (189,000 versus about 300,000), 38,000 more tractor-drawn mowers (for a total of 113,000), 10,000-12,000 more grain combines (to about 22,000), and 21,000-23,000 more potato harvesters (to some 26,000).

Most of Poland's larger tractors were produced in Polish and Soviet factories during 1971-75, and this will be the case in the next 5 years. In recent years, tractors of 35-75 horsepower were made under licenses from American companies. Combine output—produced at Plock, in central Poland—should increase from the current 4,000 units a year to 8,000 by 1980.

Concomitant with these increases in equipment, the Government plans to improve transportation facilities and storage and processing capacity. Funds requested for expanding the scale of production will receive priority consideration. Planned are sizable numbers of village residences and 1 million stalls each for cattle and hogs. Sprinkling systems will be installed on 30,000 hectares and land improvements will be made on 850,000 hectares of arable land and 320,000 hectares of pasture and meadows.

Also the Government is going to spend about Zl100 billion to finance expropriation of 1.6-2 million hectares of private land for inclusion in socialized farm units. Owners will either be compensated directly or retired and pensioned. The Government's action represents an accelerated takeover, compared with that of 1971-75, when just 700,000 hectares of private land were expropriated.

The plan has targeted fertilizer consumption in 1980 at 250 kilograms per hectare on agricultural land, compared with 180 kilograms in 1975. Although Poland imports all of its potash and some other raw materials, the country's production capacity is large enough to manufacture all of the nitrogen and phosphate required by the farm sector. At present, Poland's most significant investment in the fertilizer industry is the enlargement of the Politz chemical factory. By 1980, the complex there will produce about one-third of Poland's fertilizer. Domestic factories also

should quadruple the supply of plant protecting agents by 1980.

The full productive capacity of the country's farmers will be mobilized to meet the goals of the 1976-80 plan and to maintain food prices at their artificially low level. The plan estimates food subsidies will cost about Zl100 billion annually and will constitute a serious drain on the economy.

Personal disposable income in 1976-80 is expected to climb by 45 percent which, although just half of the unprecedented and unplanned rise of 90 percent in 1971-75, will also put the economy to a severe test.

In 1971-75, retail prices of staple foods in Government stores remained steady while salaries went up at a rapid rate, increasing the demand for food, particularly meat. Meanwhile, production has fallen far short of market requirements. In addition, a steady climb in producer prices narrowed the gap between producer and retail prices. Thus, some farmers found it advantageous to sell grain and livestock to the Government and buy meat and bread in the shops.

According to the 1976-80 plan, a shift is contemplated from consumption of potatoes and grain products toward meat, fish, eggs, dairy products, fruit, and vegetables. Per capita meat consumption is expected to climb to about 80 kilograms, milk products to 320, butter to 8.5, sugar to 46, vegetables to 120, and fruits to 60 kilograms. Per capita egg consumptionis seen climbing from 206 a year to 230 by 1980. Potatoes are expected to fall to 150 kilograms per person and grain products to 108 kilograms.

Per capita meat consumption increased by 17 kilograms (32 percent) during 1971-75 to 70 kilograms. During 1976-80, a further 10 kilogram (14 percent) increase is expected, putting the meat supply under similar strain to that in the previous 5 years.

Retail food supply is targeted to rise only 35-37 percent, while disposable income increases by 45 percent during 1976-80. This means that a smaller share of available income will be needed for food and inflationary pressures will result. In 1974, consumers spent 41.6 percent of their disposable incomes for food, about 1.6 percentage points less than in 1970.

One of the Government's problems is to find politically and socially acceptable means to cool the overheated economy. One of these—a sugar rationing plan, for example—has halted sugar hoarding and stabilized the supply for both domestic and export use.

Meat prices have remained unchanged in Government shops at the pre-July 1976 levels, while uncontrolled prices on the farmers' market were allowed to go as much as 40 percent higher. This dual market pricing could serve two ends. It may weaken the black market, while at the same time serve as a face-saving device by allowing access to a limited supply of meat at stable prices, and at the same time permit additional access to supply, but at a higher price.

The Government also wants to improve its external trade situation. Deteriorating badly in 1971-75, the accumulated trade deficit is estimated at $8-9 billion by the end of last year. Foreign trade in agriculture products has operated in the red during the past 10 years. In 1974 and 1975, the farm produce import/export ratio became especially bad, sliding to a 1.4:1 ratio, from a more nearly normal 1.2:1 ratio. And 1976 saw no improvement.

In previous years, the cost of imported feed was at least offset by income from exported livestock products. But in the past few years, feed imports—pushed upward by smaller than normal grain harvests—grew to the point where they surpassed the value of meat imports.

Trade plans for 1976-80 call for a 15.5 percent increase in exports and a 9.4 percent rise in imports. During the current crop year, Poland will import 6.5 million tons of grain and about 1.3 million tons of oilmeal. A 22-percent drop in the hog inventory during 1976 forced the Government to reduce meat exports and to import about 70,000 tons.

The long-term understanding between the United States and Poland to supply the latter country with 2.5 million tons of U.S. grain (plus or minus 20 percent) a year, and a recent agreement under which Canada will supply 1.2-2.4 million tons of grain during the next 3 years, will take care of much of Poland's grain-import requirements. The Soviet Union, too, will provide Poland with about 1 million tons of grain during 1976/77.

Until its economy stabilizes, Poland will continue to rely on foreign loans for much of its food imports. It used about a $100 million line of credit from the U.S. Commodity Credit Corporation (CCC) in fiscal 1977, and so far has been authorized imports from this country of $145 million in grain, $20 million for lard, $8 million for tobacco, and $4 million for edible protein.

Certain specific investment programs will be financed by banks in the West and there are indications the Soviet Union will permit Poland to run a negative balance in bilateral trade. The USSR-Polish trade protocol for 1977 calls for a 15 percent rise in the value of trade between the two countries, but it does not spell out the ratio of imports to exports. □

"In 1976, the United States exported $492 million worth of agricultural products to Poland, up 28 percent from $384 million a year earlier. Last year's exports included wheat (736,000 metric tons), foodgrains (2.2 million tons), soy meals (431,000 tons), manufactured tobacco, (1,370 tons), and cotton (32,000 running bales).

Nutrition Is Key To Higher Pork Output In Latin America

By Don Bushman

More than 80 percent of Latin America's swine population consists of unimproved, native breeds that are raised predominantly on subsistence farms lacking management, nutrition, and sanitation standards. As a result, although Latin America's swine population is estimated at 15 percent of the world population, pork production is equivalent to only about 5 percent of the world total.

The key to changing this situation is introducing meat breeds and improving feeding techniques, management, and sanitation, according to an experiment conducted in the Dominican Republic last year.

Generally, native breeds of swine are less productive than improved strains; the rate of gain for native pigs is only 65 percent of that of improved breeds, and native swine are 22 percent less efficient in conversion of feed to weight gain when receiving a balanced diet.

Carcass weight is also reduced in native animals; while meat-type breeds yield approximately 50 percent high-quality cuts, native pigs yield only about 40 percent.

It is apparent that there is tremendous potential for swine production in Latin America. However, there is little to be gained by introducing improved breeds before improving the conditions of health, nutrition, and management.

In general, swine production in Latin America is carried out on noncommercial farms and is usually a secondary enterprise. Owners tend to have very low incomes, prohibiting large investments in feed or equipment necessary to support an economically productive unit.

The native pigs are usually turned loose on pasture or in small lots next to living quarters. They are fed garbage, leftovers, forage, and occasionally grain, tubers, or fruits, such as cassava or bananas, and seldom—if ever—receive supplemental protein, vitamins, and minerals.

In many instances, production can be improved considerably by utilizing simple feeding and management practices that sould be within the reach of producers. But such information is still not available to the majority of producers, although farmers are receptive to new ideas and can improve swine production significantly.

It is estimated that the production of swine in Latin America could be bolstered tremendously simply be applying available nutrition technology. The poor level of nutrition used on the majority of the swine farms in Latin America is a result not only of failure to recognize the principles of nutrition and feeding, but also to the unavailability, poor distribution, and high cost of feed ingredients, particularly high-quality protein supplements, vitamins, and minerals.

The slow growth rate of animals caused by insufficient feeding and poor nutrition delays the time required for pigs to reach market weight and lowers feed efficiency.

A feeding demonstration conducted last year in the Dominican Republic points out the difference various diets can make in terms of animal weight gain, profit return to farmers, and feed efficiency.

In mid-February 1976, 20 meat-type crossbred hogs weighing approximately 26 kilograms each were randomly allotted to two feeding treatments—a basal control ration used by the typical small, more progressive Dominican swine producer, and a complete commercial swine ration formulated from maize and soybean meal, fortified with vitamins and minerals.

The typical farm diet used in this experiment was a fairly good ration, compared with the one many farmers actually use. It met crude protein requirements, but was deficient in lysine, as well as sulfur containing amino acids.

The pigs receiving the commerical mix performed well—having an average daily weight gain of 545 grams. On the other hand, the pigs receiving the typical ration used by small farmers gained only 340 grams daily and required an additional 3 months to reach market weight.

Similarly, pigs fed on the latter unbalanced diet were also inefficient in converting feed to liveweight gain, requiring over 7 kilograms of feed to produce a kilogram of gain, compared with the 4.5 kilograms of feed required by the pigs receiving the balanced diet to achieve the same amount of gain.

This points out the importance of using high-quality protein sources to balance the protein content of local feed ingredients.

While the cost of the typical diet was much cheaper per ton of feed, compared with the commercial mix, it was considerably more expensive in terms of net return to the farmer. The feed cost to produce a kilogram of weight gain using the typical diet was 96 U.S. cents, compared with a cost of 85 cents to produce a kilogram of gain using the commercially prepared diet.

In addition, the indirect cost of producing pigs, depreciation of buildings, and increased labor were approximately 1.75 times greater with the typical diet, owing to the increased time required to reach market weight. As a result, the typical diet was essentially a break-even proposition—the net return to the farmer per pig was $1.86.

On the other hand, use of the more expensive, commercially prepared diet resulted in a profitable return of $12.79 per pig, making the production of pork economically feasible.

In some areas of Latin America where the typical diet used on many small farms is nothing more than table scraps, fruit, or homegrown grains, the difference

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Mr. Bushman is an animal nutritionist and program manager for the American Soybean Association in Mexico City.

Italy To Import More Wheat, Less Feedgrains

Italy's wheat harvest this year probably will be the smallest in nearly 20 years, necessitating imports of more than 3 million tons of wheat. Feedgrain outturns, on the other hand, are likely to reach a record 7 million tons, mainly because some former wheat area was planted to corn and barley. Feedgrain imports, as a result, will be lower than last year's.

Italy probably will have to import more than 3 million tons of wheat during 1977/78 to compensate for this year's anticipated 7.7-million-ton harvest, the smallest in nearly 20 years.

The Italian Government plans to buy 500,000 tons of Durum and 200,000 tons of soft wheat on world markets during the summer and fall—a significant opportunity for U.S. exporters of wheat.

Italy's feedgrain production, on the other hand, is expected to approach a record level of 7 million tons in 1977, largely because some former wheat area was switched to corn and barley.

If the harvested amounts are at average levels, feedgrain import requirements should drop by about 10 percent during 1977/78 to about 5.3 million tons. Corn imports may not lose ground, however, since the European Community's recent decision to levy discounts for sea deliveries apparently favors corn over barley.

Rice production estimates for 1976 have dropped further to just over 900,000 tons, 10 percent below the previous year's crop. Exports for the 1976/77 season are expected to reach about 500,000 tons, down one-quarter from the previous season's record level.

Italy's soft wheat harvest is expected to total only 4.8 million tons, reflecting a sharp drop in area caused by excessively wet fields at planting time. Plantings were down 18 percent compared with the year-earlier level, and yields are not expected to equal last year's records.

The 1977 Durum crop is expected to reach only about 2.9 million tons, about 10 percent below last year's level. The shortfall is a result of a sharp drop in area, caused by bad weather at planting time. The smaller area will be partly offset by increased yields.

The prospect for a small harvest of soft wheat during 1977 has already affected the trade pattern for the 1976/77 marketing year. Total imports for the year are likely to reach 1.8 million tons.

Exports of flour have fallen in 1976/77 because EC export subsidies are not high enough to allow flour produced from Italian soft wheat to be competitive on world markets.

Some millers, however, have been able to export by importing wheat into duty-free areas for milling and re-exporting as flour.

During August-March, about 137,000 tons of soft wheat were imported for this duty-free trade, suggesting exports of about 105,000 tons of flour.

The 1976/77 trading season for Durum wheat has been relatively slow. Stocks have been ample and prices have remained at unattrative levels. The current estimate of imports in 1976/77—350,000 tons — includes 70,000 tons imported duty-free for milling and reexport as pasta and semolina flour.

Imports of wheat during the 1977/78 season at about 3.15 million tons would include about 2.4 million tons of soft wheat and 750,000 tons of Durum.

Both Italian and EC policies continue to favor Durum production in the southern half of the country. Last year, the Durum producer subsidy was paid be area rather than by production.

This year, the EC will provide deficiency payments to Durum growers only in the southern and a few central regions, thus discouraging Durum production in the north—policies designed to protect the incomes of southern wheat farmers, who have no viable alternative to Durum production.

The outlook for Italy's 1977 corn crop points to record production. Total wheat area was reduced by 670,000 hectares. About a third of this area would be suitable for corn, and a shift to corn area of about 90,000 hectares seems probable.

The increase in area is likely to be offset slightly by lower yields. However, given fair weather in 1977, production should increase by about 5 percent to a record 5.6 million tons.

Despite various Government programs designed to slow imports, Italy's feedgrain imports have continued at fairly normal levels throughout the 1976/77 season.

With the lira apparently stabilized on exchange markets and most anti-import programs discontinued, corn imports should total about 4.6 million tons for the season, 6 percent more than in the previous year.

With the good prospects for the corn crop, the outlook for imports during 1977/78 will be correspondingly diminished, especially since the livestock and poultry industries are expected to expand only slightly. Consequently, corn imports probably will reach only 4.2 million tons in 1977/78, a 9 percent reduction from the previous season's level.

Although Italian corn prices have more or less reflected world prices this year, Government programs for foreign currency purchases and import deposits (now terminated) have added to importers' costs. While foreign corn imports have traditionally dominated the Italian market—especially prices—there is some evidence that this dominance may be weakening. If the 1977 crop reaches estimates, domestic

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Based on dispatch from Lloyd Fleck, Assistant Agricultural Attaché in Rome.

production will account for 57 percent of total corn supplies.

Since rice prices for the 1976 crop were very good, planting intentions are higher this year. Paddy area for 1977 is expected to increase by at least 4 percent of the 1976 area. However, delays in plantings, caused by persistent rains, may affect the level of production and yields.

During August 1976-February 1977, Italy exported 201,077 tons of rice—mainly to EC countries—16 percent less than in the year-earlier period. Market prices recently have shown signs of weakness, although they are higher than those of the previous marketing year. □

Pork Output

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in return to farmers may be even more dramatic than in the typical diet used in the experiment.

Using a corn diet without supplemental protein, pigs required almost 16 months to attain a market weight of only 60 kilograms. However, supplementing this diet, or one that is yucca-based or banana-based, with a high-quality protein supplement resulted in satisfactory weight-gain performance.

It is quite probably that the cost of swine production can be reduced considerably from present costs, simply by using locally produced ingredients such as rice by-products, cassava, molasses, or bananas with a good protein supplement. □

Tunisian Olive Crop Up, Soy Oil Imports Drop

Tunisia's booming production of olive oil, and its inability to maintain olive oil exports at a high enough level, will reduce the country's imports of U.S. soybean oil this year to their lowest point.

Tunisia recently increased the percentage of olive oil in its subsidized blend of edible oil from 5 percent to 75 percent in an attempt to reduce the large stocks of olive oil that have accumulated because of rising olive production and decreasing exports to traditional Italian and French markets. As a result, imports of U.S. soybean oil in fiscal 1977 will probably not total more than 1,000 metric tons, the lowest level since Tunisia first began importing U.S. soybean oil in 1962/63.

During the 1960's and early 1970's, Tunisia exported most of its olive oil to France and Italy, and imported the lower priced soybean oil from the United States (usually on concessional terms) to blend with a small amount of olive oil for domestic consumption. Tunisia was thus able to earn badly needed foreign exchange by exporting the higher priced olive oil when domestic production of olive oil was barely enough to cover normal oil consumption.

Imports of U.S. soybean oil reached a peak of 50,000 tons in 1967 and ranged between 27,000 and 46,000 tons from 1970 through 1974. During these years, Tunisian olive oil exports to Italy and France were unrestricted. In 1974, Tunisia exported 93,000 tons of olive oil, of which 78,000 went to Italy and France.

However, when in June 1975 the European Community (EC) suddenly raised the compensatory levy on Tunisian olive oil from zero to 270 units of account (about $320) per ton, Tunisia's 1975 olive oil exports dropped to 42,000 tons. This levy, imposed to equalize the import price and the price the EC guaranteed to domestic producers, mainly in Italy, forced the Tunisian Oil Office (ONC) to lower producer prices from $1,150-$1,265 per ton for the 1974/75 crop year to $850-$900 in 1975/78.

Production in the 1975/76 crop year reached 158,000 tons, an excellent harvest in the up-and-down olive cycle within an already rising trend pushed upward by new plantings made in the 1960's.

Stocks increased to unmanageable proportions. Tunisia protested its economic hardship, and Italy took 20,000 tons of oil under a special agreement in 1976 which gave Italian fishermen the right to fish in Tunisian waters. Tunisia also began seeking new markets in the United States, Libya, Iran, and other countries.

Exports recovered to 70,000 tons in 1976 and are expected to increase to 80,000 in 1977. This is still not enough to reduce the stocks, because even in the not-so-good year of 1976/77, production is estimated to be more than 100,000 tons. Production could reach 200,000 tons in a record year in the future.

Since November 1976, the EC compensatory levy has been fixed at 420 units of account (about $500), which is the difference between the Tunisian export price ($1,500 per ton) and the Italian domestic price ($2,000 per ton).

However, under the Cooperation Agreement with the EC, Tunisia receives a reduction of 5 units of account per ton as a "commercial advantage" and an additional reduction of 200 units of account on the condition that the Tunisian Oil Office apply an export tax of the same amount. This export tax is used to subsidize the price of edible oil to the Tunisian consumer. □

By Herbert H. Steiner, economist, Foreign Demand and Competition Division, ERS.

Foreign Agriculture

Vol. XV No. 31 August 1, 1977

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The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of public business required by law of this Department. Use of funds for printing *Foreign Agriculture* has been approved by the Director, Office of Management and Budget, through June 30, 1979. Yearly subscription rate: $34.35 domestic, $42.95 foreign, single copies 70 cents. Order from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

Mexico's Cotton Output And Exports Head Up

Mexico's cotton production and exports were higher in 1976/77 than projected earlier this year, according to the U.S. Agricultural Attaché in Mexico City. And, with the expanded area and continued good weather, both should be even higher next year.

With the crop already ginned, 1976/77 output is placed at 1,027,000 bales (480 lb net), compared with 902,000 bales last year. Exports of raw cotton are expected to be around 530,000 bales, up from 430,000 last year. Production in 1977/78 should move up to 1,520,000 bales and exports could reach a level of 730,000 bales.

The more optimistic assessment of 1976/77 production and exports stems from favorable weather in important growing areas and ample application of necessary inputs of fertilizer and insecticide that pushed yield higher than last year's nationally by about 9 percent.

The Attaché estimates 1977/78 cotton production at a little over 1.5 million bales, although some sources are predicting a level as high as 1.6 million bales in the wake of good weather in the important northwest region. Yield, however, may not be as good as the record level of nearly 4.2 bales per hectare in 1976/77, because new areas brought into production will probably not be as productive as last year's smaller area.

Consumption is predicted to remain at a low level throughout 1977/78 unless cotton textiles become more competitive, thereby allowing consumption to return to a more normal level.

Many textile mills are still operating much below capacity, while current prices of synthetic fibers have encouraged greater consumption of synthetics. Domestic consumption in 1976/77 is down 19 percent compared with that of the previous year.

Trade sources predict continued low consumption levels for 1977/78, although domestic utilization could return to more normal levels should the export market for cotton textiles become more competitive during 1977/78.

New FAS Publications

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- Soviet Cotton Production and Trade (FAS M-277)
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- Hog Numbers Recover in Most Countries in 1976 (FLM 8-77)
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- U.S. Oilseed and Product Exports and Imports Up (FOP 11-77)
- U.S. Exports of Livestock and Products Exceed Imports Again in April (FLM 12-77)
- Marketing U.S. Cotton in Greece (FC-12). This is the first in a series: Others to follow are on Spain, Portugal and Italy.

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